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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,642	12/22/2000	Brady J. Moroney	D-2696/WOD	4538
7590	12/07/2006		EXAMINER ROBINSON BOYCE, AKIBA K	
The Trane Company Patent Department - 12-1 3600 Pammel Creek Road La Crosse, WI 54601			ART UNIT 3628	PAPER NUMBER

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/747,642

Applicant(s)

MORONEY ET AL.

Examiner

Akiba K. Robinson-Boyce

Art Unit

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of Claims***

1. Due to communications filed 10/19/06, the following is a non-final office action. Claims 1-22 are pending in this application. Prosecution has been re-opened. The previous rejection has been withdrawn, and claims 1-22 are rejected as follows.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14, 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levkoff et al (US 2002/0129001 A1), and further in view of Anderson et al (US 2003/0040870 A1).

As per claim 1, Levkoff et al discloses:

developing an electronic specification describing the product and its components, (Fig. 1);

forwarding the electronic specification to one of the several companies, ([0189], shows sending component data in electronic format includes specifications, w/ [0191], lines 5-6, send an e-mail to all permissioned users for the project);

the specific company building the component or product in accordance with requirements in the electronic specification, ([0124], user build project, also see [0188], shows drag and drop of components for building);

the specific company testing the component product, ([0125], components in project database tested);

the specific company appending the test results to the electronic specification, ([0192], lines 10-16, shows electronic change data received where data validity is tested and compared against original specification);

Levkoff et al does not specifically disclose the specific company determining if the product is completed; and either shipping the completed product to the customer or forwarding the electronic specification but does disclose compliance validation for components in [0183], and discloses sending an e-mail notification to users on a project that there has been a component change due to testing for data validity in ([0192], lines 32-37.

However, Anderson et al discloses:

the specific company determining if the product is completed; and either shipping the completed product to the customer or forwarding the electronic specification, ([0086], after array is made and passes quality control checks, the array is shipped to the user). Anderson et al discloses this limitation in an analogous art for the purpose of ultimately analyzing the completed array design.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to determine if the product is completed, and to ship the completed

product with the motivation of allowing the customer to have physical custody of the product.

As per claim 2, Levkoff et al fails to disclose wherein the forwarding step includes the step of providing a central server to centralize the forwarding step, but does disclose sending component data in electronic format in [0189]).

However, Anderson et al discloses:

wherein the forwarding step includes the step of providing a central server to centralize the forwarding step, ([0035], design sent to server, and forwarded to a computer). Anderson et al discloses this limitation in an analogous art for the purpose of completing the detailed array specification .

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the forwarding step to include the step of providing a central server to centralize the forwarding step with the motivation of allowing data transmitted to become identified with the system by passing through a central location.

As per claims 3, 17, Levkoff et al discloses:

providing a bill of materials for the components and the product at the time the electronic specification is developed/creating a bill of materials and a specification ([0159], bill of materials).

As per claims 4, 21, Levkoff et al discloses:

periodically comparing the bill of materials to the electronic specification to verify the accuracy of both/ wherein the installation developing sequence includes a further

step of cross checking the bill of materials with the installation sequence, ([0202], product cost category/crossed referenced).

As per claim 5, Levkoff et al discloses:

step of saving at least one updated version of the electronic specification, ([0189], lines 1-12, electronic updates).

As per claim 6 Levkoff et al discloses:

comparing the updated version of the electronic specification with an electronic specification having appended test results, ([0189], lines 12-18, quality control analysis on input files based on specifications).

As per claim 7, Levkoff et al discloses:

the step of revising the updated version to include late customer changes, ([0189], lines 24-27, input file further updated so all data is captured).

As per claim 8, Levkoff et al discloses:

comparing the revised updated version of the electronic specification with an electronic specification having appended test results; wherein the comparing step includes the steps of determining and implementing late customer changes to the electronic specification in the product or components, ([0189], lines 27-30, shows further quality control analysis done on updated input file).

As per claim 9, Levkoff et al discloses:

Generating a sales order in an electronic form; converting the sales order to an electronic build document, (Fig. 7A);

transferring the electronic build document to a first company for the construction of a first subassembly for the product, ([0189], shows sending component data in electronic format includes specifications, w/ [0191], 2<sup>nd</sup> col., lines 5-6, send an e-mail to all permissioned users for the project);

testing the subassembly of the first company, ([0125], components in project database tested);

attaching the test results to the electronic build document, ([0192], lines 10-16, shows electronic change data received where data validity is tested and compared against original specification);

forwarding the electronic build document to a second company for main assembly, ([0191], 2<sup>nd</sup> col., lines 5-6, send an e-mail to all permissioned users for the project, w/ [0073], shows that each project is defined by one or more geographic identifiers which specify where the project is located, which may include one or more of a zip code, street address, latitude/longitude, a city or municipality, a state, and the like).

attaching a communications bus to the product, ([0080], communications medium);

Levkoff et al does not specifically disclose the following, but does disclose testing and adding operability test results to the electronic build document for each component as discussed above, however the following limitation is obvious with Levkoff:

testing the operability of the bus/adding the bus operability test results to the electronic build document/attaching the first subassembly to the bus, testing the operability of the first subassembly and the bus/attaching the subassembly and bus

operability test results to the electronic build document,, (this limitation is obvious since the communications medium is associated with the tested component, and it would therefore be obvious to also test the medium, and also add the operability test results of the communications medium to the electronic build document since the component's operability relies on the operability of the communications medium).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to test the operability of the bus, and add the bus operability test results to the electronic build document with the motivation of also testing and adding information about items associated with the actual component.

Levkoff et al does not specifically disclose shipping the product, but does disclose shipping lead time in [0189].

However, Anderson et al discloses:

shipping the product , ([0086], after array is made and passes quality control checks, the array is shipped to the user). Anderson et al discloses this limitation in an analogous art for the purpose of showing that the finished product will be sent to the user.

It would have been obvious to one of ordinary skill in the art to ship the completed product with the motivation of allowing the customer to have physical custody of the product.

As per claim 10, Levkoff et al discloses:

generating a sales order representative of a product; (Fig. 7A);



developing build and test instructions from the sales order, ([0135], installation and maintenance instructions);

Levkoff et al does not specifically disclose the following, however does disclose installation instructions as disclosed above.

However, Anderson discloses:

developing an installation sequence from the build and test instructions, ([0002], lines 4-14, show desired sequences derived from customer orders); and

building the product using the build and test instructions in the sequence laid out by the installation sequence, ([0021], creation of content according to the sequence).

Anderson discloses the above limitations in an analogous art for the purpose of showing how the installation instructions are implemented.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to develop an installation sequence, and build the product using the sequence with the motivation of building the product according to installation specifics.

As per claim 11, Levkoff et al discloses:

wherein the developing and building steps are performed under the control of a control device, ([0176], shows quality control processes implemented).

As per claim 12, Levkoff et al discloses:

wherein the product includes a communications bus, and input and output components to be operably linked to the bus, ([0080], communications medium).

As per claim 13, Levkoff et al discloses:

wherein the developing an installation sequence step is accomplished by a tester device which also oversees the building step, ([0125], components in project database tested).

As per claim 14, Levkoff et al discloses:

calling for the next input or output component to be operably connected to the communication bus as identified by the installation sequence; and verifying the operability of the component and the bus, ([0205], lines 30-34, move on to next transaction).

As per claims 16, Levkoff et al discloses:

wherein the responding step further includes the step of providing the signaling component with operational parameters, ([0187], project parameters).

As per claim 18, Levkoff et al discloses:

Wherein the developing the build and test instruction step includes the further step of using the specification to create a build and test file, ([0124]/[0125]).

As per claim 19, Levkoff et al discloses:

Wherein the build and test file is in the xml format, ([0063], XML database exists for building components).

As per claim 20/22, Levkoff et al discloses:

Wherein the installation sequence developing step includes the further step of cross checking the installation sequence with the specification/wherein the verifying step includes the further steps of testing the operation of the communications bus,

testing the operation of the component, and cross checking the identity, parameters and the operation of the component and the bus with the specification, ([0192]).

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levkoff et al (US 2002/0129001 A1), and further in view of Anderson et al (US 2003/0040870 A1), and further in view of Scheitlin (CH 692372 A5).

As per claim 15, neither Levkoff et al nor Anderson et al disclose receiving a first signal from the component by means of bus; determining a unique identity for the signaling component; responding by means of bus with a second signal to the component providing the component with an identity, but Levkoff et al does disclose testing and adding operability test results to the electronic build document for each component as discussed in [0125], and [0192].

However, Scheitlin discloses:

receiving a first signal from the component by means of bus; determining a unique identity for the signaling component; responding by means of bus with a second signal to the component providing the component with an identity, (see Abstract, shows a coupling device connected to a bus, and also to a signal line for operation of a building component). Scheitlin discloses this limitation in an analogous art for the purpose of showing the control of building components via an input device connected to a bus.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to receive a first signal from the component by means of bus; determine a unique identity for the signaling component; respond by means of bus with

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a second signal to the component providing the component with an identity with the motivation of using bus signals to control the operation of building components.

***Response to Arguments***

5. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Friday 9am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A handwritten signature in black ink, appearing to read 'A. R. B.', with a stylized flourish extending to the right.

A. R. B.

November 30, 2006